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PUBLIC UTILITIES COMMISSION

BEFORE THE PUBLIC UTILITIES COMMISSION

OF THE STATE OF HAWAII

- - - - In the Matter of - - - -	)	PUC Docket No. 2008-0273
	)	
PUBLIC UTILITIES COMMISSION	)	
	)	
Instituting a Proceeding to Investigate the Implementation of Feed-in Tariffs	)	
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HAWAII RENEWABLE ENERGY ALLIANCE'S

COMMENTS ON THE HECO COMPANIES

PROPOSED RELIABILITY STANDARDS

AND

CERTIFICATE OF SERVICE

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I. INTRODUCTION

By its Order filed on October 24, 2008, the Hawaii Public Utility Commission ("Commission") opened the instant docket, referred to hereafter as the "FiT" docket. The Commission, by its Order filed on November 28, 2008, granted the November 13, 2008 motion of Hawaii Renewable Energy Alliance ("HREA") to intervene in the FiT docket.

In accordance with the Commission's Interim Decision and Order ("D&O") filed on September 25, 2009 and its Schedule Setting Order filed on October 29, 2009, as modified by its "Order Granting Extension Request" filed on March 11, 2010, HREA hereby respectfully submits this document constituting "Comments on the HECO Companies Proposed Reliability Standards," filed with the Commission on February 8, 2010 in the document entitled "HECO Companies Report on Reliability Standards."

II. HREA COMMENTS ON THE HECO COMPANIES PROPOSED RELIABILITY STANDARDS

HREA incorporates by reference:

1. HREA Information Requests ("IRs") to HECO on "Proposed Queuing and Interconnection Procedures and Reliability Standards," filed with the Commission on February 16, 2010;
2. The HECO Companies Response to HREA's IRs, filed with the Commission on March 1, 2010; and
3. HREA "Comments Regarding HECO's Proposed Conceptual Framework For Reliability Standards Working Group," filed with the Commission on March 15, 2010.

Discussion. For the purpose of this document, HREA would like to review briefly our IRs to HECO and their responses.

1. Seeking a Definition of Reliability. Basically, in its IRs submitted on February16, 2010, HREA sought a definition of reliability, by asking HECO questions related to what we believe are key components of the system reliability of HECO's grids, including the following:
    a. grid frequency, e.g., what is the allowable variance from a desired 60 hz?
    b. system voltage, e.g., what is the allowable variance from a desired of 120 volts at residences, and 240 or 480 volts volts at commercial or industrial customers sites?
    c. loss of load probability, e.g., what are the desired criteria used by HECO for "loss of load" and what the probability?
    d. X factors, e.g., what are other factors important to system reliability.

    Notes: in its response, the HECO Companies provided a good discussion of grid frequency issues. HREA agrees that windfarms can cause some variations in grid frequency. However, referencing Figure 3 of Attachment 3 of its report, the

indicated variations appear to be well within HECO's criteria of 59.85 to 60.15 hz for normal operation, except (if we are reading the chart correctly) for a couple of "dips," one at about 9:13 AM and one at about 10:16 AM. However, given the "scale" on this chart, it is hard to tell whether the "dip" was a "one second" or "one minute" event. Subject to further discussion, it is hard to understand whether this represents a "serious" situation. HREA notes that HECO did not provide any quantitative goals for the probabilities associated with maintaining grid frequency and grid voltage (as opposed to a "single occurrence" criteria), and "Loss of Load." HREA is, of course, open to more discussion the all issues related to HECO's ability to follow the load on each of its island grids. Meanwhile, we find that we are quite a distance from having a definition of "reliability."

2. Grid Studies. HREA asked HECO to identify and provide copies of all studies conducted on grid operations in HECO's service territory in the past several years.

   Notes: in its response, HECO referenced the recent study conducted by BEW Engineering and several project-specific studies that could not be made available, presumably because of confidentiality agreements that were signed. Anyway, HREA finds it interesting that no references were made by HECO to important studies HREA understood were made by GE, and we believe there are others studies going back perhaps more than 20 years, including one prepared by Hank Zaininger. Apparently, we should have phrased our question more carefully, e.g., instead of "past several years," we could have said all studies conducted since 1983? Our point is simply this: if there is to be a meaningful discussion of how to make the grids renewably-friendly, all relevant studies need to be made available to the FiT Parties.

3. The BEW Engineering Report. HREA requested a copy of the complete BEW report, and we now understand the "summary" of the report provided to the Parties is the report.

4. The Plan Moving Forward. HREA asked clarifying questions regarding:

    a. opportunities for DG at the transmission vs. sub-transmission vs. distribution levels,

    b. alternative grid operational strategies,

    c. plans for pumped-hydro and battery storage, and

    d. utility-stakeholder groups to investigate grid operational issues in a collaborative manner.

Notes: HECO references plans for more transmission level projects on Maui and Hawaii, but do not answer directly as to whether other projects, as such as FiT, might be possible at the sub-transmission or transmission level, as alternatives to the primary consideration of FiT at the distribution level. We agree that there are complex issues, but we also find it interesting that HECO would be worried about more renewable DG at the distribution level on Maui, while they are seriously considering more wind, which HECO asserts can cause problems. So, we are confused. Is HECO saying they can find ways to integrate the windfarms, a concept which we like, but not integrate more DG, a concept that we do NOT like, or something else? Or more importantly, why can't we do both?

HREA is encouraged that HECO is investigating alternative operational strategies using their existing systems, including improvements to system dispatch and spinning reserve capabilities. However, what appears to be missing, and particularly critical to implementing the planned windfarm increments on Maui, is a discussion of storage in the context of this IR. From HREA's perspective it seems

high unlikely that even the second increment of wind at Kaheawa could be implemented without significant storage, given the high levels of nigh-time curtailment that the project would likely experience.

HREA finds HECO's comments about "accelerating their evaluation of....energy storage technologies..." encouraging. However to put this into perspective, a pumped-hydro project was proposed at Kahua Ranch back in the early 1990's that would have provided peak shaving, voltage support and possibly other capabilities. Also, HELCO sought assistance from the Pacific International Center for High Technology Research ("PICTHR") and Sandia National Laboratory for a battery storage unit to be installed at the Keahole Power Plant in the mid-1990's to provide for peak shaving, frequency regulation, voltage support and black-start capabilities. HREA's point is this: the discussion of storage in Hawaii is hardly new. We are only disappointed that it has taken so long. While the projects discussed in HECO's response are or could be worthy, we are not sure, given the use of large batteries in utility-scale applications (such as in California and Puerto Rico) in the 1990's, and now on Lanai with the PV project, that such implementation in Hawaii needs further study. Instead, we believe the time has come for HECO to "spec" out systems and conduct competitive bidding solicitations as soon as possible. This approach, typically called the "Build, Own, Operate and Transfer" ("BOOT"), could be implemented rapidly. Thus, HREA is ready to participate in the appropriate venue to discuss alternative battery and pumped-storage options for Maui and particularly for Hawaii.

Regarding the utility-stakeholder group, HREA is pleased that HECO is willing to consider this approach, witness its proposal, filed with the Commission on February 26, 2010. Witness, however, our March 15, 2020 filing as referenced above, we

have a number of concerns about the details of HECO's proposal for the Reliability Standards Working Group ("RSWG"). And we note that other Parties in the FiT docket share some of the same concerns. And as noted in our filing, we believe there could be a near-term role for the RSWG, assuming that the Parties can reach agreement on a truly collaborative process, both in design and implementation. Our point is this: we have not seen a HECO-stakeholder collaborative effort yet, but remain eternally and cautiously optimistic about the prospects that one can exist.

Conclusions. We do not appear to be lacking for comments on the FiT docket regarding reliability standards, but there is less agreement on what said standards are or should be, or how they should be used. We agree that reliability standards are needed to ensure the integrity and reliability of our utility grids, and once properly defined, understood and implemented, we believe the increased use of renewables can be facilitated.

Regarding HECO's Proposed Reliability Standards, we see their proposal more as a rationale for how the implementation of FiT and NEM should be limited. As noted in our March 15, 2010 filing, we see HECO's RSWG proposal as potentially helpful, but only as a precursor to a broader-based investigation of interconnection and grid operation issues.

To be clear, we need:

1. real reliability standards, such as proposed by Blue Planet via a stakeholder-driven process fostered by the Northern American Electric Reliability Corporation ("NERC"). We see this as a much broader-based activity, and therefore support the pursuit of this investigation in new docket;
2. advanced operational strategies, as we discussed in our March 15, 2010 filing, that will required to implement new reliability standards in concert with our state energy goals. We see this as part of item "1", which should also address any changes to specific HECO interconnection rules, such as 14 H and 18H; and

3. a short-term, "workaround strategy" as we are organizing and gearing up for a new docket. To be clear, development of reliability standards and working on advanced operational strategies for the long-term should not stop implementation of FiT and NEM in the short-term. As pointed out in on March 15, 2010 docket, the RSWG might serve that limited purpose and in so doing inform the new docket, NEM, FiT, Rule 14H, Rule 18H, etc. More specifically, the RSWG should look not only to immediate changes to the rules, but also to the design and implementation of mitigation measures on a pilot basis. Finally, we reiterate concerns about how a RSWG might be designed and implemented to be a truly collaborative process

<This concludes our response>

DATED: March 23, 2010. Honolulu, Hawaii.

CERTIFICATE OF SERVICE

The foregoing HREA Comments were served on the date of filing by Hand Delivery or electronically transmitted to each such Party as follows.

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DATED: Honolulu, Hawaii, March 23, 2010